S03P0842

FIG. 1

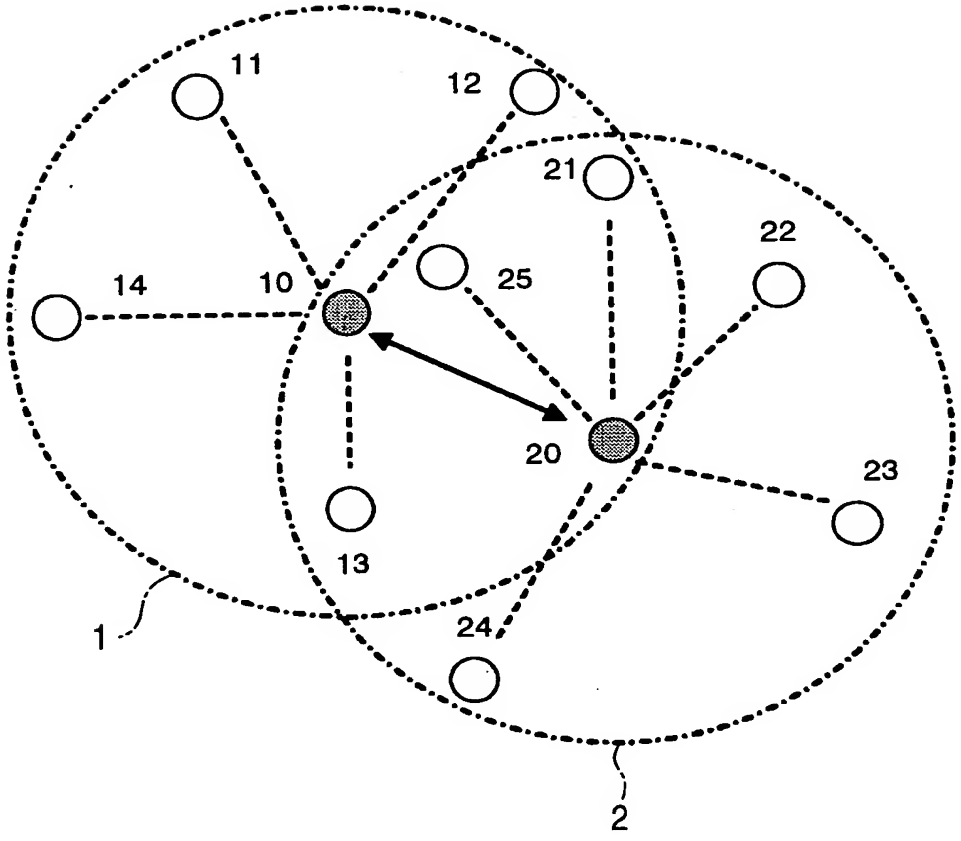


FIG. 2

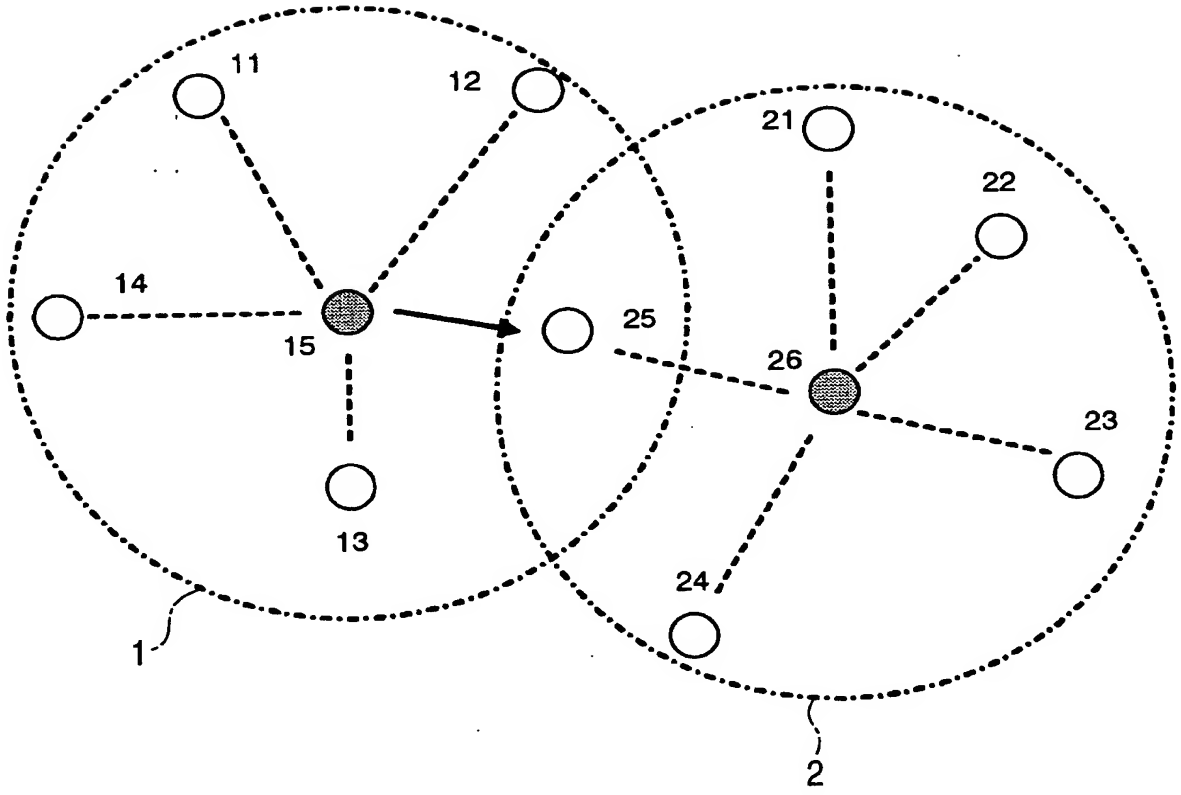


FIG. 3

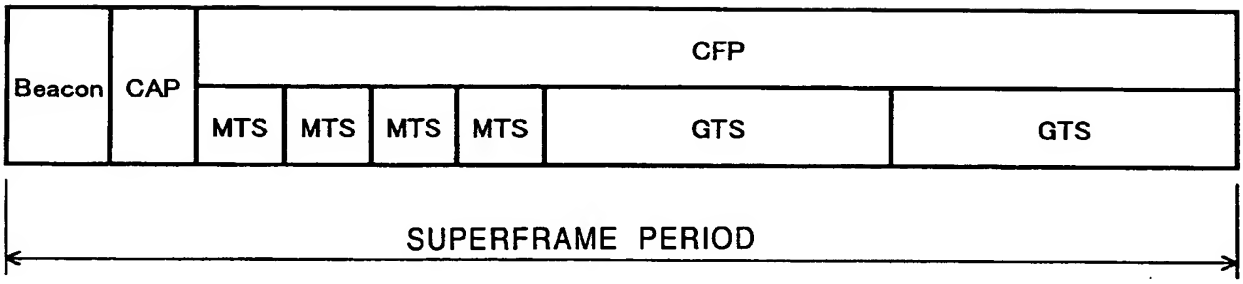


FIG. 4

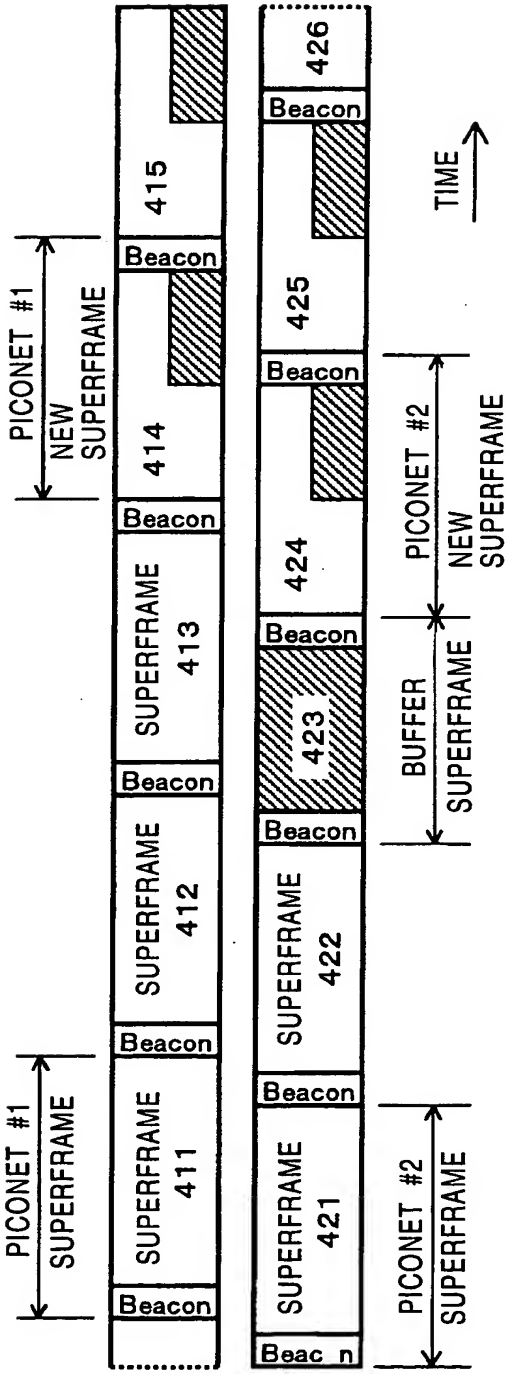

PICONET #1
SUPERFRAME
SUPERFRAME 411
Beacon
SUPERFRAME 412
Beacon
SUPERFRAME 413
Beacon
414
415
Beacon
PICONET #1
NEW SUPERFRAME
Beac n
SUPERFRAME 421
Beacon
SUPERFRAME 422
Beacon
423
Beacon
424
425
Beacon
426
Beacon
BUFFER SUPERFRAME
PICONET #2
NEW SUPERFRAME
PICONET #2
SUPERFRAME
TIME

FIG. 5

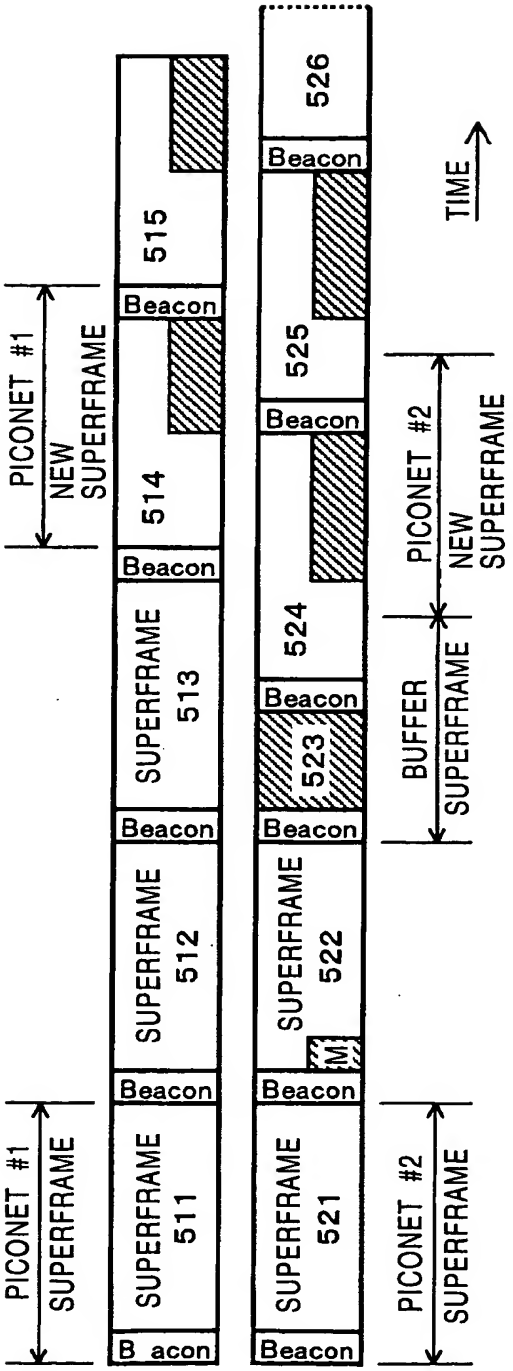

PICONET #1
SUPERFRAME
SUPERFRAME 511
Beacon
SUPERFRAME 512
Beacon
SUPERFRAME 513
Beacon
514
Beacon
515
PICONET #1
NEW SUPERFRAME
SUPERFRAME 521
Beacon
M
SUPERFRAME 522
Beacon
523
Beacon
524
Beacon
525
Beacon
526
BUFFER
SUPERFRAME
PICONET #2
NEW SUPERFRAME
PICONET #2
SUPERFRAME
TIME

FIG. 6

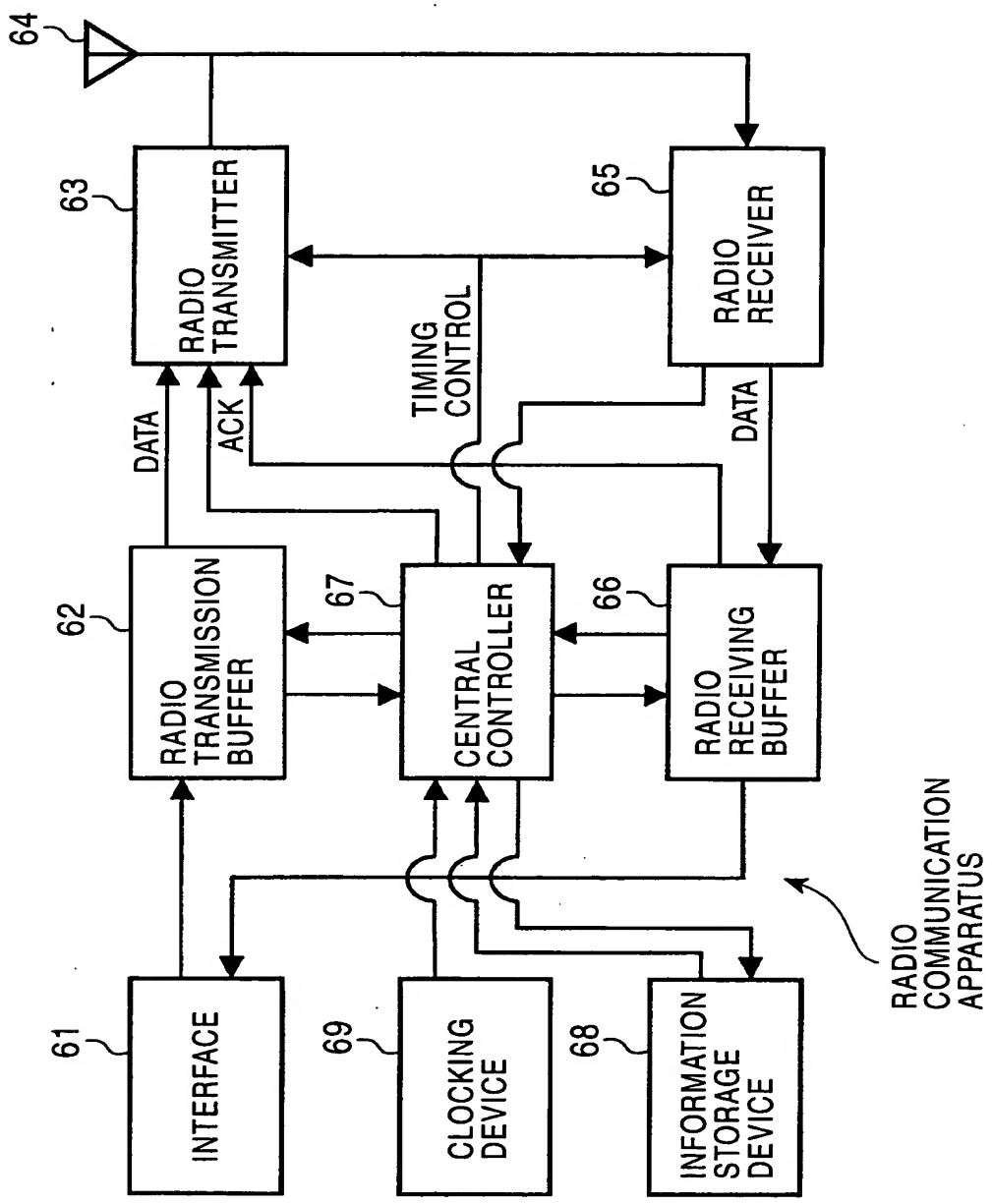

64
63
RADIO TRANSMITTER
65
RADIO RECEIVER
TIMING CONTROL
DATA
ACK
DATA
62
RADIO TRANSMISSION BUFFER
67
CENTRAL CONTROLLER
66
RADIO RECEIVING BUFFER
RADIO COMMUNICATION APPARATUS
61
INTERFACE
69
CLOCKING DEVICE
68
INFORMATION STORAGE DEVICE

FIG. 7

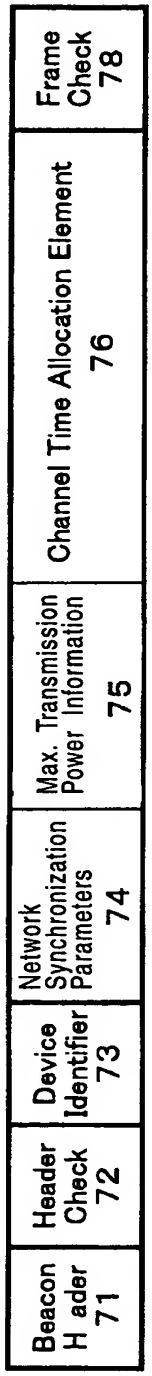

Beacon H ader 71
Header Check 72
Device Identifier 73
Network Synchronization Parameters 74
Max. Transmission Power Information 75
Channel Time Allocation Element 76
Frame Check 78

FIG. 8

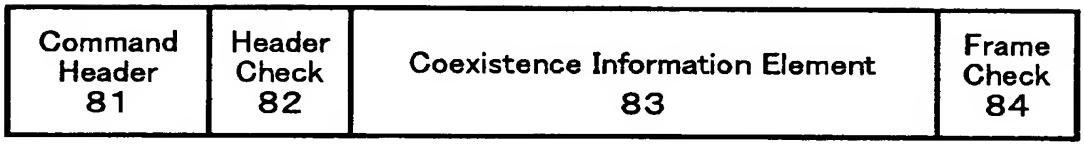


FIG. 9

FIG. 10

FIG. 11

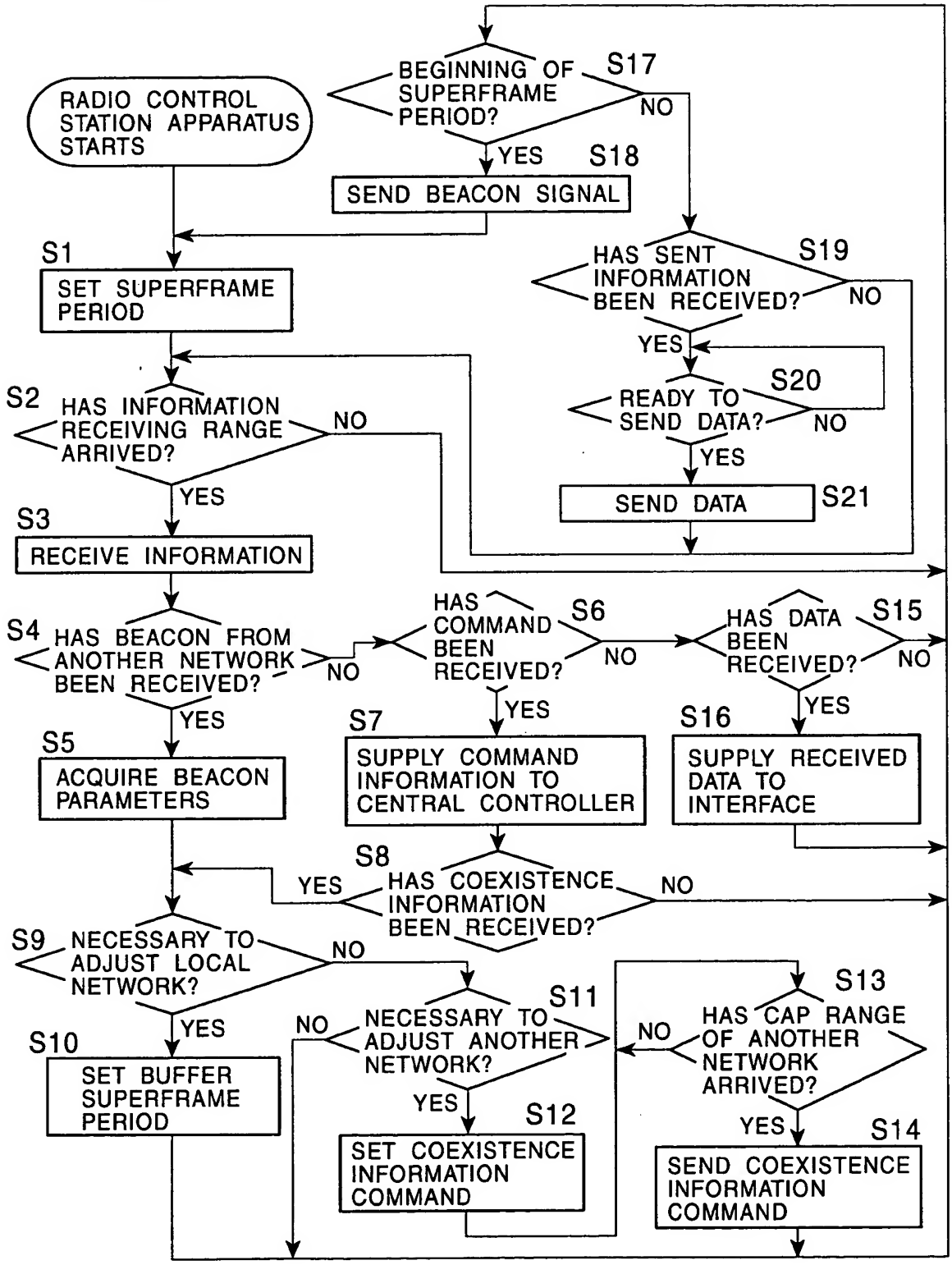
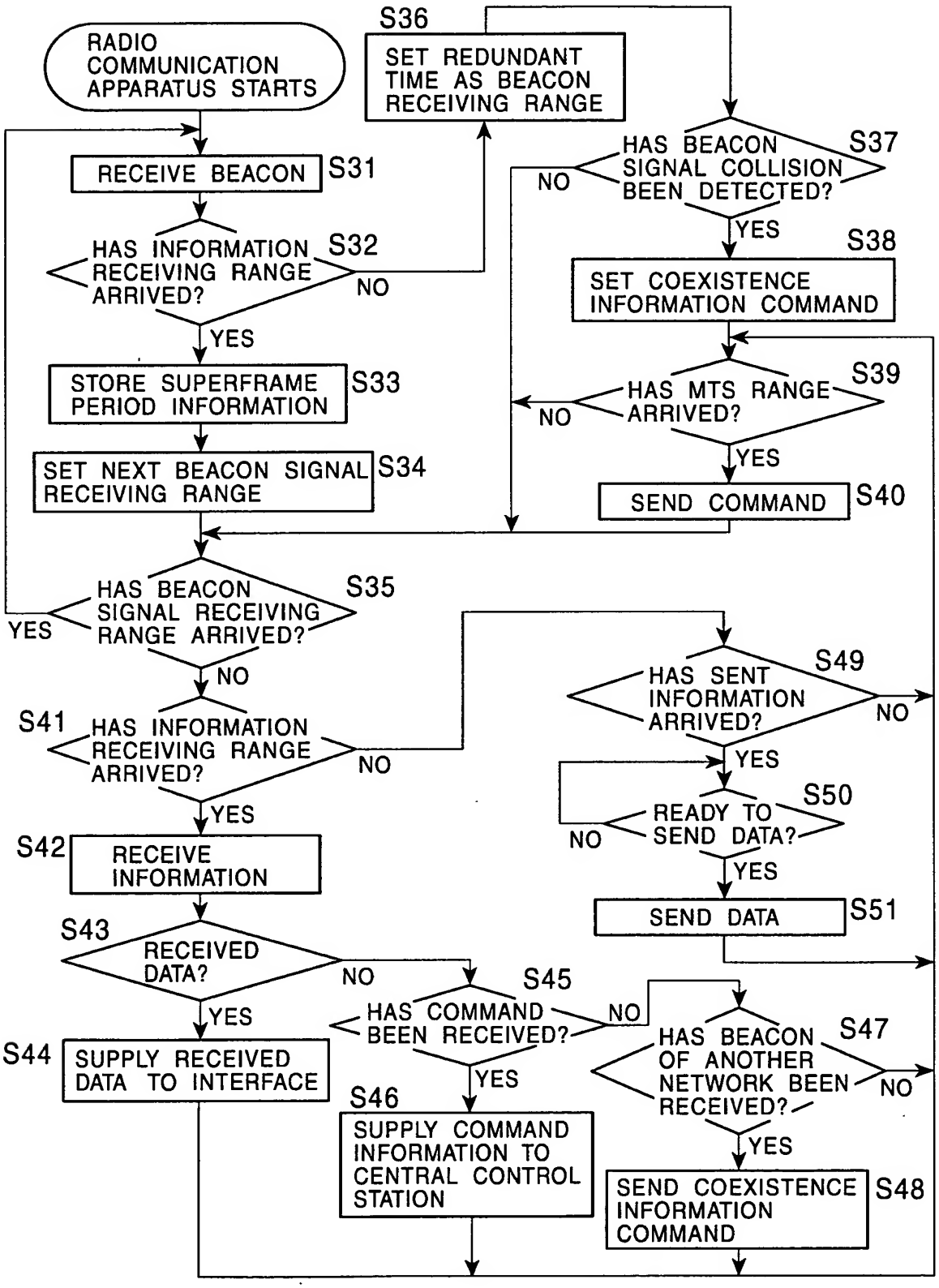

RADIO CONTROL STATION APPARATUS STARTS
S1
SET SUPERFRAME PERIOD
S2
HAS INFORMATION RECEIVING RANGE ARRIVED?
NO
YES
S3
RECEIVE INFORMATION
S4
HAS BEACON FROM ANOTHER NETWORK BEEN RECEIVED?
NO
YES
S5
ACQUIRE BEACON PARAMETERS
S9
NECESSARY TO ADJUST LOCAL NETWORK?
NO
YES
S10
SET BUFFER SUPERFRAME PERIOD
BEGINNING OF SUPERFRAME PERIOD?
S17
NO
YES
S18
SEND BEACON SIGNAL
HAS SENT INFORMATION BEEN RECEIVED?
S19
NO
YES
READY TO SEND DATA?
S20
NO
YES
SEND DATA
S21
HAS COMMAND BEEN RECEIVED?
S6
NO
YES
S7
SUPPLY COMMAND INFORMATION TO CENTRAL CONTROLLER
HAS DATA BEEN RECEIVED?
S15
NO
YES
S16
SUPPLY RECEIVED DATA TO INTERFACE
S8
HAS COEXISTENCE INFORMATION BEEN RECEIVED?
YES
NO
NECESSARY TO ADJUST ANOTHER NETWORK?
S11
NO
YES
S12
SET COEXISTENCE INFORMATION COMMAND
HAS CAP RANGE OF ANOTHER NETWORK ARRIVED?
S13
NO
YES
S14
SEND COEXISTENCE INFORMATION COMMAND

FIG. 12


RADIO COMMUNICATION APPARATUS STARTS
RECEIVE BEACON
S31
HAS INFORMATION RECEIVING RANGE ARRIVED?
S32
NO
YES
STORE SUPERFRAME PERIOD INFORMATION
S33
SET NEXT BEACON SIGNAL RECEIVING RANGE
S34
HAS BEACON SIGNAL RECEIVING RANGE ARRIVED?
S35
YES
NO
S36
SET REDUNDANT TIME AS BEACON RECEIVING RANGE
HAS BEACON SIGNAL COLLISION BEEN DETECTED?
S37
NO
YES
SET COEXISTENCE INFORMATION COMMAND
S38
HAS MTS RANGE ARRIVED?
S39
NO
YES
SEND COMMAND
S40
S41
HAS INFORMATION RECEIVING RANGE ARRIVED?
NO
YES
S42
RECEIVE INFORMATION
S43
RECEIVED DATA?
NO
YES
S44
SUPPLY RECEIVED DATA TO INTERFACE
S45
HAS COMMAND BEEN RECEIVED?
NO
YES
S46
SUPPLY COMMAND INFORMATION TO CENTRAL CONTROL STATION
S47
HAS BEACON OF ANOTHER NETWORK BEEN RECEIVED?
NO
YES
SEND COEXISTENCE INFORMATION COMMAND
S48
S49
HAS SENT INFORMATION ARRIVED?
NO
YES
S50
READY TO SEND DATA?
NO
YES
SEND DATA
S51